What is claimed is:

1. A system for creating an enhanced color image on a movable planar surface using a plurality of arrays of dots, said surface moving in a first direction parallel to said surface, said system comprising:

first means for creating a first one of said arrays in a first color as a first colored array on said surface, said dots forming said first colored array being spaced at first predetermined distances from each other;

second means for creating a second one of said arrays in a second color as a second colored array generally superimposed on said first colored array, said dots forming said second colored array being spaced at second predetermined distances from each other; and,

means for controlling both all of said first predetermined distances which are parallel to and perpendicular to said first direction and all of said second predetermined distances which are parallel to and perpendicular to said first direction to result in a particular intentional misregistration between said dots of said second colored array and said dots of said first colored array, said misregistration having the property of enhancing said image.

2. The system of claim 1 and wherein said property enhances at least color uniformity of said image as perceived by a human viewer.

3. The system of claim 2 further comprising:

third means for creating a third one of said arrays in a third color as a third colored array generally superimposed on said second colored array and said first colored array, said dots forming said third colored array being spaced at third predetermined distances from each other; and,

said controlling means including means for controlling said third predetermined distances to result in another particular intentional misregistration between said third colored array and both said first colored array and said second colored array, said another particular misregistration having the property of further enhancing said color uniformity of said image for said viewer.

4. The system of claim 2 wherein said system is a thermal imaging system and said surface is a receiver substrate.

5. The system of claim 3 wherein said system is a thermal imaging system and said surface is a receiver substrate.

6. The system of claim 3 and wherein said controlling means includes means for controlling said third predetermined distances to be equal to said first predetermined distances and for aligning said third colored array with said first colored array.

7. The system of claim 5 and wherein said receiver substrate is formed as a web or ribbon, said system further comprising:

means for reeling said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate:

said first means comprising:

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image:

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

means for moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate:

said second means comprising:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed

distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

means for moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said third means comprising:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including a third predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

means for moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

8. The system of claim 7 and wherein said first color is cyan, said second color is magenta, and said third color is yellow.

9. The system of claim 1 and wherein said system is subjected to mechanical misalignment perturbation, said property including the feature of rendering optical artifacts impereceptible which otherwise would have been pereceptible when viewing said image.

10. The system of claim 6 and wherein said receiver substrate is formed as a web or ribbon, said system further comprising:

means for reeling said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate:

said first means comprising:

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image;

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

means for moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate;

said second means comprising:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

means for moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said third means comprising:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including said first predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

means for moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

11. The system of claim 10 and wherein said controlling means further comprises:

clock means for generating a plurality of timing clock pulse trains;

pulse generator means, operatively coupled from said clock means, for providing a plurality of outputs of excitation pulse bursts in timed sequence with at least one of said clock pulse trains; and

means for operatively coupling:

each one of said first predetermined number of said thermally controlled print head elements of said first print head to a like number of a first group of said outputs respectively from said pulse generator means, said first group of said outputs being in timed sequence with a first one of said clock pulse trains;

each one of said second predetermined number of said thermally controlled print head elements of said second print head to a like number of a second group of said outputs respectively from said pulse generator means, said second group of said outputs being in timed sequence with a second one of said clock pulse trains; and

each one of said first predetermined number of said thermally controlled print head elements of said third print head to a like number of a third group of said outputs respectively from said pulse generator means , said third group of said outputs being in timed sequence with said first one of said clock pulse trains,

whereby the time intervals between successive said bursts from said first group of outputs are equal to each other and equal to the time intervals between successive said bursts from said third group of outputs.

12. The system of claim 11 and wherein said first predetermined number of thermally controlled print head elements is 300 per inch, said second predetermined

number of thermally controlled print head elements is 400 per inch, and said third predetermined number of thermally controlled print head elements is 300 per inch.

13. The system of claim 12 further comprising:

means for coordinating the timing of said plurality of excitation pulse burst outputs and said first speed:

means responsive to operation of said coordinating means for controlling each one of said thermally controlled print head elements of said first print head and each one of said thermally controlled print head elements of said third print head to deposit 400 dots per inch per head on said surface with each respective one of said 400 dots per inch from said third print head being deposited upon its corresponding one of said 400 dots per inch from said first print head, thereby depositing a 300 by 400 dots per inch pattern within said field of view of said image: and,

means responsive to operation of said coordinating means for controlling each one of said thermally controlled print head elements of said second print head to deposit 266 dots per inch on said surface throughout said field of view, thereby intermingling a 400 by 266 dots per inch pattern with said 300 by 400 dots per inch pattern:

whereby the superimposition of dots in this manner has the property of enhancing color uniformity of said image for said viewer, each one of said dots being individually indistinguishable to a naked eye of said viewer.

14. A system for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed regular dot-patterns upon a planar surface, each one of said patterns being monochromatic and different in color from that of each other of said patterns, said surface moving in a first direction parallel to said surface, said method comprising:

means for intentionally misregistering at least one of said regular dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said first direction to obtain a pattern misregistration: and,

means for controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

15. The system of claim 14 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

16. The system of claim 15 and wherein said system is subjected to mechanical misalignment perturbation, said enhancing said color image including the feature of rendering optical artifacts impereceptible which otherwise would have been perceptible when viewing said image.

17. A system for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed dot-patterns upon a portion of a movable curved surface having two orthogonal spatial dimensions and having curvature in only one of said dimensions, the direction of motion of said surface being in said one of said dimensions, each one of said patterns being monochromatic and different in color from color of each other of said patterns, said method comprising:

means for intentionally misregistering at least one of said dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said direction of motion to obtain a pattern misregistration; and,

means for controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

18. The system of claim 17 and wherein said dot patterns are comprised of a plurality of dots being randomly positioned on said surface in said only one of said dimensions and being regularly positioned on said surface along the other of said dimensions.

19. The system of claim 18 and wherein said plurality of dots are regularly positioned in both of said dimensions thereby providing regular superimposed dot patterns.

20. The system of claim 17 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

21. The system of claim 17 and wherein said curved surface is elliptical.

22. The system of claim 17 and wherein said curved surface is cylindrical.

23. The system of claim 18 and wherein said dots are positioned on said surface at first spatial frequencies too high to be perceived as individual dots by an unaided eye of said human viewer, and wherein said pattern misregistration forms a new pattern having other spatial frequencies likewise too high to be perceived as individual dots by an unaided eye of said human viewer.

24. Apparatus for creating an enhanced color image on a movable planar surface using a plurality of arrays of dots, said surface moving in a first direction parallel to said surface, said apparatus comprising:

first apparatus that creates a first one of said arrays in a first color as a first colored array on said surface, said dots forming said first colored array being spaced at first predetermined distances from each other;

second apparatus that creates a second one of said arrays in a second color as a second colored array generally superimposed on said first colored array, said dots forming said second colored array being spaced at second predetermined distances from each other; and,

control apparatus that controls both all of said first predetermined distances which are parallel to and perpendicular to said first direction and all of said second predetermined distances which are parallel to and perpendicular to said first direction to result in a particular intentional misregistration between said dots of said second colored array and said dots of said first colored array, said misregistration having the property of enhancing said image.

25. The apparatus of claim 24 and wherein said property enhances at least color uniformity of said image as perceived by a human viewer.

26. The apparatus of claim 25 further comprising:

third apparatus that creates a third one of said arrays in a third color as a third colored array generally superimposed on said second colored array and said first

colored array, said dots forming said third colored array being spaced at third predetermined distances from each other; and,

said control apparatus including a device for controlling said third predetermined distances to result in another particular intentional misregistration between said third colored array and both said first colored array and said second colored array, said another particular misregistration having the property of further enhancing said color uniformity of said image for said viewer.

27. The apparatus of claim 25 wherein said apparatus is thermal imaging apparatus and said surface is a receiver substrate.

28. The apparatus of claim 26 wherein said apparatus is thermal imaging apparatus and said surface is a receiver substrate.

29. The apparatus of claim 26 and wherein said control apparatus includes another device for controlling said third predetermined distances to be equal to said first predetermined distances and for aligning said third colored array with said first colored array.

30. The apparatus of claim 28 and wherein said receiver substrate is formed as a web or ribbon, said apparatus further comprising:

reeling apparatus to reel said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate;

said first apparatus comprising:

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image;

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

first drive apparatus for moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate:

said second apparatus comprising:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

second drive apparatus for moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said third apparatus comprising:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including a third predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

third drive apparatus for moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

31. The apparatus of claim 30 and wherein said first color is cyan, said second color is magenta, and said third color is yellow.

32. The apparatus of claim 24 and wherein said apparatus is subjected to mechanical misalignment perturbation, said property including the feature of

rendering optical artifacts impereceptible which otherwise would have been perceptible when viewing said image.

33. The apparatus of claim 29 and wherein said receiver substrate is formed as a web or ribbon, said apparatus further comprising:

reel apparatus to reel said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate;

said first apparatus comprising:

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image;

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

first drive apparatus for moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate;

said second apparatus comprising:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

second drive apparatus for moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said third apparatus comprising:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including said first predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

third drive apparatus for moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

34. The apparatus of claim 33 and wherein said control apparatus further comprises:

a clock for generating a plurality of timing clock pulse trains;

a pulse generator, operatively coupled from said clock, for providing a plurality of outputs of excitation pulse bursts in timed sequence with at least one of said clock pulse trains; and

apparatus for operatively coupling:

each one of said first predetermined number of said thermally controlled print head elements of said first print head to a like number of a first group of said outputs respectively from said pulse generator, said first group of said outputs being in timed sequence with a first one of said clock pulse trains;

each one of said second predetermined number of said thermally controlled print head elements of said second print head to a like number of a second group of said outputs respectively from said pulse generator, said second group of said outputs being in timed sequence with a second one of said clock pulse trains; and

each one of said first predetermined number of said thermally controlled print head elements of said third print head to a like number of a third group of said

outputs respectively from said pulse generator, said third group of said outputs being in timed sequence with said first one of said clock pulse trains,

whereby the time intervals between successive said bursts from said first group of outputs are equal to each other and equal to the time intervals between successive said bursts from said third group of outputs.

35. The apparatus of claim 34 and wherein said first predetermined number of thermally controlled print head elements is 300 per inch, said second predetermined number of thermally controlled print head elements is 400 per inch, and said third predetermined number of thermally controlled print head elements is 300 per inch.

36. The apparatus of claim 35 further comprising:

apparatus for coordinating the timing of said plurality of excitation pulse burst outputs and said first speed;

first thermal control apparatus, responsive to operation of said coordinating apparatus, for controlling each one of said thermally controlled print head elements of said first print head and each one of said thermally controlled print head elements of said third print head to deposit 400 dots per inch per head on said surface with each respective one of said 400 dots per inch from said third print head being deposited upon its corresponding one of said 400 dots per inch from said first print head, thereby depositing a 300 by 400 dots per inch pattern within said field of view of said image; and,

second thermal control apparatus, responsive to operation of said coordinating apparatus, for controlling each one of said thermally controlled print head elements of said second print head to deposit 266 dots per inch on said surface throughout said field of view, thereby intermingling a 400 by 266 dots per inch pattern with said 300 by 400 dots per inch pattern;

whereby the superimposition of dots in this manner has the property of enhancing color uniformity of said image for said viewer, each one of said dots being individually indistinguishable to a naked eye of said viewer.

37. Apparatus for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed regular dot-patterns upon a planar surface, each one of said patterns being monochromatic and different in color from that of each other of said patterns, said surface moving in a first direction parallel to said surface, said apparatus comprising:

apparatus for intentionally misregistering at least one of said regular dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said first direction to obtain a pattern misregistration; and,

control apparatus for controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

38. The apparatus of claim 37 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

39. The apparatus of claim 38 and wherein said apparatus is subjected to mechanical misalignment perturbation, said property including the feature of rendering optical artifacts imperceptible which otherwise would have been perceptible when viewing said image.

40. Apparatus for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed dot-patterns upon a portion of a movable curved surface having two orthogonal spatial dimensions and having curvature in only one of said dimensions, the direction of motion of said surface being in said one of said dimensions, each one of said patterns being monochromatic and different in color from color of each other of said patterns, said apparatus comprising:

apparatus for intentionally misregistering at least one of said dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said direction of motion to obtain a pattern misregistration; and,

control apparatus for controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

41. The apparatus of claim 40 and wherein said dot patterns are comprised of a plurality of dots being randomly positioned on said surface in said only one of said dimensions and being regularly positioned on said surface along the other of said dimensions.

42. The apparatus of claim 41 and wherein said plurality of dots are regularly positioned in both of said dimensions thereby providing regular superimposed dot patterns.

43. The apparatus of claim 40 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

44. The apparatus of claim 40 and wherein said curved surface is elliptical.

45. The apparatus of claim 40 and wherein said curved surface is cylindrical.

46. The apparatus of claim 41 and wherein said dots are positioned on said surface at first spatial frequencies too high to be perceived as individual dots by an unaided eye of said human viewer, and wherein said pattern misregistration forms a new pattern having other spatial frequencies likewise too high to be perceived as individual dots by an unaided eye of said human viewer.

47. In a computer-controlled system for creating an enhanced color image on a movable planar surface using a plurality of arrays of dots, said surface moving in a first direction parallel to said surface, a computer program product for use in said system, said computer program product including a computer usable medium having computer readable program code thereon, said computer readable program code comprising:

first program code for creating a first one of said arrays in a first color as a first colored array on said surface, said dots forming said first colored array being spaced at first predetermined distances from each other;

second program code for creating a second one of said arrays in a second color as a second colored array generally superimposed on said first colored array,

said dots forming said second colored array being spaced at second predetermined distances from each other; and,

program code for controlling both all of said first predetermined distances which are parallel to and perpendicular to said first direction and all of said second predetermined distances which are parallel to and perpendicular to said first direction to result in a particular intentional misregistration between said dots of said second colored array and said dots of said first colored array, said misregistration having the property of enhancing said image.

48. The computer program product of claim 47 and wherein said property enhances at least color uniformity of said image as perceived by a human viewer.

49. The computer program product of claim 48 further comprising:

third program code for creating a third one of said arrays in a third color as a third colored array generally superimposed on said second colored array and said first colored array, said dots forming said third colored array being spaced at third predetermined distances from each other; and,

said controlling program code including program code for controlling said third predetermined distances to result in another particular intentional misregistration between said third colored array and both said first colored array and said second colored array, said another particular misregistration having the property of further enhancing said color uniformity of said image for said viewer.

50. The computer program product of claim 48 wherein said computer program product is a thermal imaging computer program product and said surface is a receiver substrate.

51. The computer program product of claim 49 wherein said computer program product is a thermal imaging computer program product and said surface is a receiver substrate.

52. The computer program product of claim 49 and wherein said controlling program code includes program code for controlling said third predetermined distances to be equal to said first predetermined distances and for aligning said third colored array with said first colored array.

53. The computer program product of claim 51 and wherein said receiver substrate is formed as a web or ribbon, said computer program product further comprising:

program code for reeling said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate;

said first program code controlling;

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image;

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

program code for moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate;

said second program code controlling;

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

program code for moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said third program code controlling;

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including a third predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

program code for moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

54. The computer program product of claim 53 and wherein said first color is cyan, said second color is magenta, and said third color is yellow.

55. The computer program product of claim 47 and wherein said system is subjected to mechanical misalignment perturbation, said property including the feature of rendering optical artifacts impereceptible which otherwise would have been pereceptible when viewing said image.

56. The computer program product of claim 52 and wherein said receiver substrate is formed as a web or ribbon, said computer program product further comprising:

program code for reeling said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate;

said first program code controlling;

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image;

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

program code for moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate;

said second program code controlling:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

program code for moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said third program code controlling:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including said first predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction;

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

program code for moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

57. The computer program product of claim 56 and wherein said controlling program code further comprises:

clock program code for generating a plurality of timing clock pulse trains:

pulse generator program code, operatively coupled from said clock program code, for providing a plurality of outputs of excitation pulse bursts in timed sequence with at least one of said clock pulse trains: and

program code for operatively coupling:

each one of said first predetermined number of said thermally controlled print head elements of said first print head to a like number of a first group of said outputs respectively from said pulse generator program code, said first group of said outputs being in timed sequence with a first one of said clock pulse trains:

each one of said second predetermined number of said thermally controlled print head elements of said second print head to a like number of a second group of said outputs respectively from said pulse generator program code, said second group of said outputs being in timed sequence with a second one of said clock pulse trains: and

each one of said first predetermined number of said thermally controlled print head elements of said third print head to a like number of a third group of said outputs respectively from said pulse generator program code , said third group of said outputs being in timed sequence with said first one of said clock pulse trains,

whereby the time intervals between successive said bursts from said first group of outputs are equal to each other and equal to the time intervals between successive said bursts from said third group of outputs.

58. The computer program product of claim 57 and wherein said first predetermined number of thermally controlled print head elements is 300 per inch, said second predetermined number of thermally controlled print head elements is 400 per inch, and said third predetermined number of thermally controlled print head elements is 300 per inch.

59. The computer program product of claim 58 further comprising:

program code for coordinating the timing of said plurality of excitation pulse burst outputs and said first speed:

program code responsive to operation of said coordinating program code for controlling each one of said thermally controlled print head elements of said first print head and each one of said thermally controlled print head elements of said third print head to deposit 400 dots per inch per head on said surface with each respective one of said 400 dots per inch from said third print head being deposited upon its corresponding one of said 400 dots per inch from said first print head, thereby depositing a 300 by 400 dots per inch pattern within said field of view of said image: and,

program code responsive to operation of said coordinating program code for controlling each one of said thermally controlled print head elements of said second print head to deposit 266 dots per inch on said surface throughout said field of view, thereby intermingling a 400 by 266 dots per inch pattern with said 300 by 400 dots per inch pattern:

whereby the superimposition of dots in this manner has the property of enhancing color uniformity of said image for said viewer, each one of said dots being individually indistinguishable to a naked eye of said viewer.

60. In a computer-controlled system for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed regular dot-patterns upon a planar surface, each one of said patterns being monochromatic and different in color from that of each other of said patterns, said surface moving in a first direction parallel to said surface, a computer program product for use in said system, said computer program product including a computer usable medium having computer readable program code thereon, said computer readable program code comprising:

program code for intentionally misregistering at least one of said regular dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said first direction to obtain a pattern misregistration: and,

program code for controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

61. The computer program product of claim 60 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

62. The computer program product of claim 61 and wherein said system is subjected to mechanical misalignment perturbation, said property including the feature of rendering optical artifacts imperceptible which otherwise would have been perceptible when viewing said image.

63. In a computer-controlled system for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed dot-patterns upon a portion of a movable curved surface having two orthogonal spatial dimensions and having curvature in only one of said dimensions, the direction of motion of said surface being in said one of said dimensions, each one of said patterns being monochromatic and different in color from color of each other of said patterns, said surface moving in a first direction parallel to said surface, a computer program product for use in said system, said computer program product including a computer usable medium having computer readable program code thereon, said computer readable program code comprising:

program code for intentionally misregistering at least one of said dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said direction of motion to obtain a pattern misregistration; and,

program code for controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

64. The computer program product of claim 63 and wherein said dot patterns are comprised of a plurality of dots being randomly positioned on said surface in said only one of said dimensions and being regularly positioned on said surface along the other of said dimensions.

65. The computer program product of claim 64 and wherein said plurality of dots are regularly positioned in both of said dimensions thereby providing regular superimposed dot patterns.

66. The computer program product of claim 63 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

67. The computer program product of claim 63 and wherein said curved surface is elliptical.

68. The computer program product of claim 63 and wherein said curved surface is cylindrical.

69. The computer program product of claim 64 and wherein said dots are positioned on said surface at first spatial frequencies too high to be perceived as individual dots by an unaided eye of said human viewer, and wherein said pattern misregistration forms a new pattern having other spatial frequencies likewise too high to be perceived as individual dots by an unaided eye of said human viewer.

70. A method for creating an enhanced color image on a movable planar surface using a plurality of arrays of dots, said surface moving in a first direction parallel to said surface, said method comprising:

creating a first one of said arrays in a first color as a first colored array on said surface, said dots forming said first colored array being spaced at first predetermined distances from each other;

creating a second one of said arrays in a second color as a second colored array generally superimposed on said first colored array, said dots forming said second colored array being spaced at second predetermined distances from each other; and,

controlling both all of said first predetermined distances which are parallel to and perpendicular to said first direction and all of said second predetermined distances which are parallel to and perpendicular to said first direction to result in a particular intentional misregistration between said dots of said second colored array and said dots of said first colored array, said misregistration having the property of enhancing said image.

71. The method of claim 70 and wherein said property enhances at least color uniformity of said image as perceived by a human viewer.

72. The method of claim 71 further comprising:

creating a third one of said arrays in a third color as a third colored array generally superimposed on said second colored array and said first colored array, said dots forming said third colored array being spaced at third predetermined distances from each other; and,

controlling said third predetermined distances to result in another particular intentional misregistration between said third colored array and both said first colored array and said second colored array, said another particular misregistration having the property of further enhancing said color uniformity of said image for said viewer.

73. The method of claim 71 wherein said method is a thermal imaging method and said surface is a receiver substrate.

74. The method of claim 72 wherein said method is a thermal imaging method and said surface is a receiver substrate.

75. The method of claim 72 further comprising controlling said third predetermined distances to be equal to said first predetermined distances and for aligning said third colored array with said first colored array.

76. The method of claim 74 and wherein said receiver substrate is formed as a web or ribbon, said method further comprising:

reeling said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate;

said creating said first one of said arrays by utilizing:

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first

direction, said fixed distance defining one dimension of a field of view of said image:

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate:

said creating said second one of said arrays by utilizing:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate; and,

moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate; and,

said creating said third one of said arrays by utilizing:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including a third predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate; and,

moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

77. The method of claim 76 and wherein said first color is cyan, said second color is magenta, and said third color is yellow.

78. The method of claim 70 and wherein said method is subjected to mechanical misalignment perturbation, said property including the feature of rendering optical artifacts imperceptible which otherwise would have been pereceptible when viewing said image.

79. The method of claim 75 and wherein said receiver substrate is formed as a web or ribbon, said method further comprising:

reeling said receiver substrate in said first direction at a first speed to obtain a moving receiver substrate;

said creating said first one of said arrays by utilizing:

a first thermal print head fixedly mounted relative to said moving receiver substrate, said first thermal print head including a first predetermined number of thermally-controlled print head elements linearly and regularly displaced over a fixed distance in a direction parallel to said surface and perpendicular to said first direction, said fixed distance defining one dimension of a field of view of said image;

a first donor ribbon having an ink side of said first color, said first donor ribbon positioned between said first thermal print head and said receiver substrate, said ink side of said first color touching said receiver substrate; and,

moving said first donor ribbon in said first direction at said first speed while in contact with said receiver substrate;

said creating said second one of said arrays by utilizing:

a second thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said first thermal print head in said first direction, said second thermal print head including a second predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed

distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a second donor ribbon having an ink side of said second color, said second donor ribbon positioned between said second thermal print head and said receiver substrate, said ink side of said second color touching said receiver substrate: and,

moving said second donor ribbon in said first direction at said first speed while in contact with said receiver substrate: and,

said creating said third one of said arrays by utilizing:

a third thermal print head fixedly mounted relative to said moving receiver substrate and displaced from said second thermal print head in said first direction, said third thermal print head including said first predetermined number of thermally-controlled print head elements linearly and regularly displaced over said fixed distance within said field of view in a direction parallel to said surface and perpendicular to said first direction:

a third donor ribbon having an ink side of said third color, said third donor ribbon positioned between said third thermal print head and said receiver substrate, said ink side of said third color touching said receiver substrate: and,

moving said third donor ribbon in said first direction at said first speed while in contact with said receiver substrate.

80. The method of claim 79 and wherein said controlling further comprises:

generating a plurality of timing clock pulse trains from a pulse generator:

providing a plurality of outputs of excitation pulse bursts in timed sequence with at least one of said clock pulse trains: and

operatively coupling:

each one of said first predetermined number of said thermally controlled print head elements of said first print head to a like number of a first group of said outputs respectively from said pulse generator , said first group of said outputs being in timed sequence with a first one of said clock pulse trains:

each one of said second predetermined number of said thermally controlled print head elements of said second print head to a like number of a second group of

said outputs respectively from said pulse generator , said second group of said outputs being in timed sequence with a second one of said clock pulse trains; and

each one of said first predetermined number of said thermally controlled print head elements of said third print head to a like number of a third group of said outputs respectively from said pulse generator , said third group of said outputs being in timed sequence with said first one of said clock pulse trains.

whereby the time intervals between successive said bursts from said first group of outputs are equal to each other and equal to the time intervals between successive said bursts from said third group of outputs.

81. The method of claim 80 and wherein said first predetermined number of thermally controlled print head elements is 300 per inch, said second predetermined number of thermally controlled print head elements is 400 per inch, and said third predetermined number of thermally controlled print head elements is 300 per inch.

82. The method of claim 81 further comprising:

coordinating the timing of said plurality of excitation pulse burst outputs and said first speed;

controlling each one of said thermally controlled print head elements of said first print head and each one of said thermally controlled print head elements of said third print head to deposit 400 dots per inch per head on said surface with each respective one of said 400 dots per inch from said third print head being deposited upon its corresponding one of said 400 dots per inch from said first print head, thereby depositing a 300 by 400 dots per inch pattern within said field of view of said image; and,

controlling each one of said thermally controlled print head elements of said second print head to deposit 266 dots per inch on said surface throughout said field of view, thereby intermingling a 400 by 266 dots per inch pattern with said 300 by 400 dots per inch pattern;

whereby the superimposition of dots in this manner has the property of enhancing color uniformity of said image for said viewer, each one of said dots being individually indistinguishable to a naked eye of said viewer.

83. A method for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed regular dot-patterns upon a planar surface, each one of said patterns being monochromatic and different in color from that of each other of said patterns, said surface moving in a first direction parallel to said surface, said method comprising:

intentionally misregistering at least one of said regular dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said first direction to obtain a pattern misregistration; and,

controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

84. The method of claim 83 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

85. The method of claim 83 and wherein said method is subjected to mechanical misregistration perturbation, said property including the feature of rendering optical artifacts imperceptible which otherwise would have been perceptible when viewing said image.

86. A method for enhancing a color image as perceived by a human viewer, said image being composed of a plurality of superimposed dot-patterns upon a portion of a movable curved surface having two orthogonal spatial dimensions and having curvature in only one of said dimensions, the direction of motion of said surface being in said one of said dimensions, each one of said patterns being monochromatic and different in color from color of each other of said patterns, said method comprising:

intentionally misregistering at least one of said dot patterns with respect to at least one of said other of said patterns in directions only parallel to and perpendicular to said direction of motion to obtain a pattern misregistration; and,

controlling said pattern misregistration to obtain a particular misregistration having the property of said enhancing said color image while said particular misregistration is not perceptible to said viewer.

87. The method of claim 86 and wherein said dot patterns are comprised of a plurality of dots being randomly positioned on said surface in said only one of said dimensions and being regularly positioned on said surface along the other of said dimensions.

88. The method of claim 87 and wherein said plurality of dots are regularly positioned in both of said dimensions thereby providing regular superimposed dot patterns.

89. The method of claim 86 and wherein said enhancing said color image includes at least enhancing color uniformity of said image.

90. The method of claim 86 and wherein said curved surface is elliptical.

91. The method of claim 86 and wherein said curved surface is cylindrical.

92. The method of claim 87 and wherein said dots are positioned on said surface at first spatial frequencies too high to be perceived as individual dots by an unaided eye of said human viewer, and wherein said pattern misregistration forms a new pattern having other spatial frequencies likewise too high to be perceived as individual dots by an unaided eye of said human viewer.